

## CLAIMS

1. A method for controlling transmit power in a radio communication system (SYS1), comprising  
first mobile station (MS1) and second mobile station  
5 (MS2);  
first base station (BTS1) and second base station (BTS2);  
said first mobile station (MSS1) communicating (601) in an uplink (UL1) connection, with an uplink power (510),  
10 with said first base station (BTS1);  
said second base station (BTS2) communicating (602) in a downlink (DL2) connection, with a downlink power (511), with said second mobile station (MS2);  
said first base station (BTS1) requesting (603) a first  
15 AMR coded mode (MR1) being associated with a first C/I ratio (210,230);  
said second mobile station (MS2) requesting (604) a second AMR coded mode (MR2) being associated with a second C/I ratio (210,230);  
20 c h a r a c t e r i s e d in that the method comprises the step of:  
adjusting (605) either the uplink power (510) or the downlink power (511) to a power level lower than an optimal power level (232) for the connection (UL1,DL2)  
25 with the highest associated C/I (230) ratio.
2. A method for controlling transmit power in a radio communication system (SYS1), comprising  
first mobile station (MS1) and second mobile station (MS2);  
30 first base station (BTS1) and second base station (BTS2);  
said first mobile station (MS1) communicating (701) in an uplink (UL1) connection, with an uplink power (510), with said first base station (BTS1);  
35 said second base station (BTS2) communicating (702) in

- a downlink (DL2) connection, with a downlink power (511), with said second mobile station (MS2);  
said first base station (BTS1) requesting (703) a first AMR coded mode (MR1);  
5 said second mobile station (MS2) requesting (704) a second AMR coded mode (MR2);  
c h a r a c t e r i s e d in that the method comprises the step of:  
adjusting (705) either the uplink power (510) or the  
10 downlink power (511) to a power level lower than an optimal power level (232) for the connection with the highest AMR coded mode request (AMR102).
3. A method according to claim 1,  
wherein adjusting (606) either the uplink power (510)  
15 or the downlink power (511) to a power level corresponding to an optimal power level (212) for the connection with the lowest associated C/I (210) ratio.
4. A method according to claim 2,  
wherein adjusting (706) either the uplink power (510)  
20 or the downlink power (511) to a power level corresponding to an optimal power level (212) for the connection with the lowest AMR coded mode request (AMR515).
5. A method according to any one of claims 1-4,  
25 wherein adjusting (607,707) said uplink power (510) is done by controlling the uplink power (520) from said first mobile station (MS1) by a command (520) from said first base station (BTS1) to said first mobile station (MS1).
- 30 6. A method according to any one of claims 1-4,  
wherein adjusting (608,708) said downlink power (511) is done by controlling the downlink power (530) from said second base station (BTS2).

7. A method according to any one of claims 1-6,  
wherein said first base station (BTS1) and said second  
base station (BTS2) are parts of a common base station  
unit.
- 5 8. A method according to any one of claims 1-4,  
wherein adjusting (607,707) said uplink power (510) is  
done by controlling the uplink power (520) from said  
first mobile station (MS1) by a command (520) from a  
base station controller (BSC1) to said first mobile  
10 station (MS1).
9. A method according to any one of claims 1-4,  
wherein adjusting (608,708) said downlink power (511)  
is done by controlling the downlink power (530) from a  
base station controller (BSC1).
- 15 10. A radio communication system (SYS1) comprising  
first mobile station (MS1) and second mobile station  
(MS2);  
first base station (BTS1) and second base station  
(BTS2);  
20 said first mobile station (MS1) communicating in an  
uplink (UL1) connection, with an uplink power (510),  
with said first base station (BTS1);  
said second base station (BTS2) communicating in a  
downlink (DL2) connection, with a downlink power (511),  
25 with said second mobile station (MS2);  
said first base station (BTS1) requesting a first AMR  
coded mode (MR1) being associated with a first C/I  
ratio (210,230);  
said second mobile station (MS2) requesting a second  
30 AMR coded mode (MR2) being associated with a second C/I  
ratio (210,230)  
c h a r a c t e r i s e d i n t h a t s a i d s e c o n d b a s e  
station (BTS2) comprises:  
means for adjusting (DL PC) the downlink power (511) to

a power level lower than an optimal power level (232) for the connection with the highest associated C/I (230) ratio; and said first base station (BTS1) comprises:

5 means for sending (UL PC) an uplink power command (520) for adjusting (UL PC) the uplink power (510) to a power level lower than an optimal power level for the connection with the highest associated C/I (230) ratio.

11. A radio communication system (SYS1) comprising  
10 a first mobile station (MS1) and second mobile station (MS2);  
first base station (BTS1) and second base station (BTS2);  
said first mobile station (MS1) communicating an uplink  
15 (UL1) connection, with an uplink power (510), with said first base station (BTS1);  
said second base station (BTS2) communicating in a downlink (DL2) connection, with a downlink power (511), with said second mobile station (MS2);  
20 said first base station (BTS1) requesting a first AMR coded mode (MR1);  
said second mobile station (MS2) requesting a second AMR coded mode (MR2);  
c h a r a c t e r i s e d in that first base station  
25 (BTS1) comprises:  
means for sending (UL PC) an uplink power command (520) for adjusting the uplink power (510) to a power level lower than an optimal power level (232) for the connection with the highest AMR coded mode request  
30 (AMR102); and in that said second base station (BTS2) comprises:  
means for sending (DL PC) the downlink power command (530) to a power level lower than an optimal power level (232) for the connection with the highest AMR  
35 coded mode request (AMR102).

12. A radio communication system according to claim 10 and 11,  
wherein said first mobile station (MS1) comprises a receiver for receiving an uplink power command (520)  
5 from said first base station (BTS1).
13. A radio communication system according to claims 10 and 11,  
wherein said means for adjusting (UL PC, DL PC) is located in said first (BTS1) or second base station  
10 (BTS2) or a base station controller (BSC1) in said radio communication system (SYS1).
14. A radio communication system according to claims 10 and 11,  
wherein said means for sending (UL PC, DL PC) an  
15 downlink (530) or uplink power command (520) for adjusting (UL PC, DL PC) the downlink (511) or uplink power (510) is located in said first base station (BTS1) or said second base station (BTS2) or a base station controller (BSC1) in said radio communication system  
20 (SYS1).
15. A radio communication system according to any one of claims 10-11,  
wherein said first base station (BTS1) and said second base station (BTS2) are parts of a common base station  
25 unit.